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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,243

07/15/2003

Hans Jacobsen

JACO0002

8919

7590

11/02/2006

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EXAMINER

LE, HUNG CHARLIE

ART UNIT

PAPER NUMBER

3663

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/620,243	JACOBSEN, HANS	
	Examiner	Art Unit	
	Hung C. Le	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 52 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 11, 13, 16, 25 - 30, 32, 34, 36, 47, 50 & 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 12, 14, 15, 17 - 24, 31, 33, 35, 37 - 46, 48, 49, 51.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Claims 1 - 52 in the reply filed on 08/28/2006 is acknowledged. The traversal is on the ground(s) that:

Species E, F & G and I, J & K are the same. Applicant is correct on this matter.

However, the other species are distinct and restrict able from each other because they have mutually exclusive characteristics.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 12, 14-15, 17-24, 31, 33, 35, 37 – 46, 48, 49 & 51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group/species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 08/28/2006.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 5, 26 – 27, 32, 47, 50 & 52 are rejected under 35 U.S.C. 112, second

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paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "...substantial...", "...predefined...", "...substantially...", "...desired..." are unclear. It is not known what all is meant and encompasses by these terms.

Therefore, these make the claims indefinite. For example:

(Claim 1): "...The first inner edge and the second inner edge being oriented substantially adjacent to one another..."

5. Claim 5 recites the limitation "the metal sheet" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 – 11, 13, 16, 25 – 30, 32, 34, 36, 47, 50 & 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Schubert (5,295,384).

With respect to claim 1: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) discloses: A bending die (10) for use in sheet metal forming, comprising: (a) a first working surface (19) extending longitudinally relative to a longitudinal axis of the bending die, the first working surface being generally planar and comprising a first inner edge extending longitudinally relative to the longitudinal axis of the bending die (See Figs 1 – 5); (b) a second working surface (20) extending longitudinally relative to the longitudinal axis of the bending die and disposed adjacent to said first working surface, the second working surface being generally planar and comprising a second inner edge extending longitudinally relative to the longitudinal axis of the bending die, the first inner edge and the second inner edge being oriented substantially adjacent to one another in a facing relationship; and (c) a frame (2) configured to provide support for said first and second working surfaces (19 & 20), while enabling said first and second working surfaces to move relative to the frame, such that a substantially fixed separation between the first inner edge and the second inner edge is maintained, regardless of a rotational angular displacement of either of the first and second working surfaces (Figs. 1 – 5).

While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

With respect to claim 2: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further

discloses: wherein said adjacent first inner edge and second inner edge are separated by a gap having a predefined width (Figs. 1 – 5), said gap affecting a configuration of the sheet metal (18) formed with the bending die (10).

With respect to claim 3: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein the adjacent first inner edge and second inner edge substantially abut one another (See Figs. 1 – 5).

With respect to claim 4: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein said frame (2) comprises a first section (2, 3, 4 & 5) and a second section (6, 7, 8 & 9), a position of said first section relative to said second section being adjustable to enable a width of a gap separating the adjacent first inner edge and second inner edge to be adjusted to a desired dimension 9See Figs. 1 – 5).

With respect to claim 5: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein for each working surface (19, 20): (a) a center of rotation is associated with the working surface; (b) relative to a portion of the working surface that is in contact with the metal sheet (18) during metal forming, the center of rotation is disposed proximate to an inner edge of said portion; and (c) regardless of the rotational angular displacement of the working surface (19, 20), the center of rotation remains substantially fixed relative to each working surface (see Figs. 1 – 5).

With respect to claim 6: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: further comprising a hinge assembly (21 & 25) disposed at each end of the first and second working surfaces (19 & 20), each hinge assembly pivotally coupling said first and second working surfaces together, such that a rotational displacement of one of said first and second working surfaces results in a corresponding rotational displacement of the other one of said first and second working surfaces, through an opposite rotational direction (See Figs. 7 – 9).

With respect to claim 7: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein at least one hinge assembly includes a return spring (15) that applies a restoring force to return said first and second working surfaces (19 & 20) to their respective original positions after the sheet metal (18) has been deformed in the bending die (10), and after a force is no longer applied to deform the sheet metal and the sheet metal has been removed from the bending die (see Fig. 6).

With respect to claim 8: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein each hinge assembly comprises a pair of sector gears (29), and a pair of rack gears (30) that are mounted on the frame (2), each sector gear engaging a different rack gear (25) and being mounted at an end of different ones of the first and second working surfaces (19, 20) (See Fig. 6).



With respect to claim 9: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein said frame (2) includes a generally U-shaped portion defined by support members (3, 4) disposed adjacent to the end of one of the first and second working surfaces (19 & 20), such that each rack gear (30) is attached to a different support member (See Figs. 1 – 6).

With respect to claim 10: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein said first and second working surfaces (19 & 20) are each generally rectangular in shape (See Figs 1 – 5).

With respect to claim 11: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein each hinge assembly (21 & 25) further comprises a first link (25) and a second link (25) joined by a pivot shaft (21), the first link being coupled to one sector gear (29), and the second link being coupled to another sector gear (See Figs. 6 - 9).

With respect to claim 13: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: further comprising a resist element that applies a resisting force to said first and second working surfaces (19 & 20), the resisting force countering at least in part a force applied to deform the sheet metal (18) (See Figs. 6 – 9) .

With respect to claim 16: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: further comprising a sector gear coupled to each one of said first and second working surfaces (19 & 20) (See Figs. 6 – 9).

With respect to claim 25: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) discloses: A press brake (10) for use in sheet metal forming, comprising: (a) a first die (19) extending longitudinally relative to a longitudinal axis of the press brake, said first die including a working surface configured to support a work piece (18), said working surface having an inner edge and an outer edge and being generally planar; second die (20) extending longitudinally relative to the longitudinal axis of the press brake (10) and disposed adjacent to said first die (19), said second die (20) including a working surface configured to support a work piece, said working surface having an inner edge and an outer edge and being generally planar; and (c) a frame (2) coupled to and supporting said first and second dies (19 & 20), while enabling said first and second dies to move relative to the frame, such that each die is able to rotate about a different respective center of rotation, and so that regardless of an rotational angular displacement of the die relative to the frame, the inner edge of the die is disposed closer to the respective center of rotation of the die than the outer edge of the die (See Figs. 1 – 5).

With respect to claim 26: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein a substantially fixed separation is maintained between adjacent

inner edges of the first and second dies (19 & 20), regardless of the rotational angular displacement of either one of the first and second dies about its respective center of rotation (See Figs. 1 – 5).

With respect to claim 27: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein said frame( 2) is adjustable, so that said substantially fixed separation can be adjusted to a desired dimension, the desired dimension being substantially maintained regardless of the rotational angular displacement of either of the first and second dies (19 & 20) (See Figs. 1 – 5).

With respect to claim 28: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: at least one spring (15) operatively coupled to at least one of the first and the second dies (19 & 20), producing a restoring force that acts to return said first die and said second die to respective original positions, after they have been rotatably displaced (See Fig. 6).

With respect to claim 29: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: a hinge assembly (21 & 25) disposed at each end of the first and second dies (19 & 20), said hinge assemblies pivotally coupling said first and second dies together, such that a displacement of one of said first and second dies results in a corresponding displacement of the other of said first and second dies (See Figs. 6 – 9)

With respect to claim 30: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein each hinge assembly (21 & 25) comprises a pair of sector gears (29), and a pair of rack gears (30) mounted on the frame (2), each sector gear engaging a different rack gear and being mounted at an end of different ones of the first and second dies (19 & 20) (See Figs. 6 – 9).

With respect to claim 32: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: means for applying a force to each of said first and second dies (19 & 20), the force being applied for one of: (a) countering at least in part a force applied to deform the sheet metal (18); and (b) causing the rotational angular displacement of said first and second dies, in order to achieve a desired deformation of the sheet metal (See Figs. 6 – 9).

With respect to claim 34: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein said means comprises one of a spring, an elastomeric material, a hydraulic system, and a pneumatic system (See Figs. 6 – 9).

With respect to claim 36: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: wherein each of said first and second dies (19 & 20) comprises a sector gear, and said frame (2) comprises a rack gear configured to engage each of said first and second dies (19 & 20) (See Figs. 6 – 9).

With respect to claim 47: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: A bending die (10) for use in sheet metal forming, comprising: (a) a first working surface (19) extending longitudinally relative to a longitudinal axis of the bending die; (b) a second working surface (20) extending longitudinally relative to the longitudinal axis of the bending die and disposed adjacent to said first working surface; (c) a frame (2) configured to provide support for said first and second working surfaces (19 & 20), while enabling said first and second working surfaces to move relative to the frame, such that a substantially fixed separation between the first inner edge and the second inner edge is maintained, regardless of a rotational angular displacement of either of the first and second working surfaces (19 & 20); and (d) a hinge assembly (21 & 25) disposed at each end of the first and second working surfaces, each hinge assembly pivotally coupling said first and second working surfaces together, such that a rotational displacement of one of said first and second working surfaces (19 & 20) results in a corresponding rotational displacement of the other one of said first and second working surfaces, through an opposite rotational direction (See Figs. 1 – 9).

With respect to claim 50: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: A press brake (10) for use in sheet metal forming, comprising: (a) a first die (19) extending longitudinally relative to a longitudinal axis of the press brake, said first die including a working surface configured to support a work piece (18), said

working surface having an inner edge and an outer edge; (b) a second die (20) extending longitudinally relative to the longitudinal axis of the press brake and disposed adjacent to said first die (19), said second die including a working surface configured to support a work piece, said working surface having an inner edge and an outer edge; and (c) a frame (2) coupled to and supporting said first and second dies (19 & 20), while enabling said first and second dies to move relative to the frame (2), such that each die is able to rotate about a different respective center of rotation, and so that regardless of an rotational angular displacement of the die relative to the frame, the inner edge of the die is disposed closer to the respective center of rotation of the die than the outer edge of the die; and (d) means for applying a force (See Fig. 6) to each of said first and second dies, the force being applied for one of: (a) countering at least in part a force applied to deform the sheet metal (18); and (b) causing the rotational angular displacement of said first and second dies (19 & 20), in order to achieve a desired deformation of the sheet metal. (See Figs. 1 – 9)

With respect to claim 52: Schubert (Abstract, Figs. 1 – 14, 26 – 29, Claims) further discloses: A bending die (10) for use in sheet metal forming, comprising: (a) a first working surface (19) extending longitudinally relative to a longitudinal axis of the bending die; (b) a second working surface (20) extending longitudinally relative to the longitudinal axis of the bending die and disposed adjacent to said first working surface; (c) a frame (2) figured to provide support for said first and second working

surfaces, while enabling said first and second working surfaces to move relative to the frame, such that a substantially fixed separation between the first inner edge and the second inner edge is maintained, regardless of a rotational angular displacement of either of the first and second working surfaces, said frame comprises a first section (2, 3, 4 & 5) and a second section (6, 7, 8 & 9), a position of said first section relative to said second section being adjustable to enable a width of a gap separating the adjacent edges of said first and second working surfaces (19 & 20) to be adjusted to a desired dimension (See Figs. 1 – 5).

8. The statements of intended use or field of use, e.g., “for use, wherein, producing, for applying, etc...” clauses are essentially method limitations or statements of intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung C. Le whose telephone number is 571-272-



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8757. The examiner can normally be reached on M-F: 07:30am - 05:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JACK KEITH  
SUPERVISORY PATENT EXAMINER

HCL  
10/27/06